

DECISION RECORD

DOI-BLM-NM-P010-2015-0057 EA

Proposed Decision: It is my decision to implement the BLM-Preferred Alternative as described in DOI-BLM-NM-P010-2015-0057 EA and to issue permits for the allotments analyzed in this document. The mitigation measures identified have been formulated into terms and conditions that will be attached to the grazing permits. This decision incorporates, by reference, those conditions identified in the attached Environmental Assessment. A summary table follows:

Table 1. Animal Units/Animal Unit Months							
Allotment Number	Allotment Name	Acres of Public Land	Percent Public Land	Animal Units Authorized	Animal Unit Months Authorized	Livestock	Livestock Number
65075	North Turkey Track	167,625	58%	2964	20629	Cattle	2964
				20	139	Horses	20
65075	TOTAL			2984	20768		2984
77075	South Turkey Track	59,867	40%	1580	7584	Cattle	1580
				20	96	Horses	20
	TOTAL			1600	7680		1600

Rationale: Based on the rangeland health assessments (RHAs) and previous monitoring, resource conditions on these allotments are sufficient and sustainable to support the level of use outlined in the term grazing permit.

The Proposed Action will be in compliance with the 1997 Roswell Resource Management Plan and Record of Decision and the 2001 New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management.

If you wish to protest this proposed decision in accordance with 43 CFR 4160.2, you are allowed 15 days to do so in person or in writing to the authorized officer, after the receipt of this decision. Please be specific in your points of protest.

The protest shall be filed with the Field Manager, Bureau of Land Management, 2909 West 2nd, Roswell, NM 88201. This protest should specify, clearly and concisely, why you think the proposed action is in error.

In the absence of a protest within the time allowed, the above decision shall constitute my final decision. Should this notice become the final decision, you are allowed an additional 30 days within which to file an appeal for the purpose of a hearing before the Interior Board of Land Appeals, and to petition for stay of the decision pending final determination on the appeal (43 CFR 4.21 and 4.410). If a petition for stay is not requested and granted, the decision will be put into effect following the 30-day appeal period. The appeal and petition for stay should be filed with the Field Manager at the above address. The appeal should specify, clearly and concisely, why you think the decision is in error. The petition for stay should specify how you will be harmed if the stay is not granted.

/s/ Kyle S. Arnold
Kyle S. Arnold
Assistant Field Manager, Resources, Roswell FO

06/08/2015
Date

/s/ Jeanette A. Martinez
Jeanette A. Martinez
Associate Field Manager, Carlsbad FO

06/10/2015
Date

FINDING OF NO SIGNIFICANT IMPACT:

I have determined that the BLM Preferred Alternative (Alternative A), as described in the Environmental Assessment (EA) will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an environmental impact statement is not required. The NEPA handbook (p. 83) indicates that the FINDING OF NO SIGNIFICANT IMPACT (FONSI) must succinctly state the reasons for deciding that the action will have no significant environmental effects. It also recommends that the FONSI address the relevant context and intensity factors.

In making this determination, I considered the following factors:

1. The activities described in the BLM Preferred Alternative (Alternative A) do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). The EA includes a description of the expected environmental consequences of issuing a 10 year term grazing permit on Allotments 62082 & 620182.
2. The activities included in the proposed action would not significantly affect public health or safety (40 CFR 1508.27(b)(2)).
3. The proposed activities would not significantly affect any unique characteristics (40 CFR 1508.27(b)(3)) of the geographic area such as prime and unique farmlands, caves, wild and scenic rivers, designated wilderness areas or wilderness study areas.
4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)).
5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).
6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).
7. The effects of issuing a ten year permit would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR 1508.27(b)(7)). The EA discloses that there are no other connected or cumulative actions that would cause significant cumulative impacts.
8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). Cultural resource surveys in the allotment have been generally limited to inspections ahead of oil and gas related activities, such as well locations and pipelines. Many areas of the allotment have been generally inventoried for cultural resources. The existing cultural data for the allotment and adjacent areas seems to be a good example of what can be reasonably expected to occur in the remainder of the allotment. No site-specific situations are known to exist where current grazing practices conflict with cultural resource preservation

and management. Some mitigation is included in the proposed action to protect cultural resources from grazing practices, such as: "In the event that grazing practices are determined to have an adverse effect on cultural resources within the allotment, the BLM, in consultation with the permittee, will take action(s) to mitigate or otherwise negate the effects. This may include but is not limited to installing physical barriers to protect the affected cultural resources, relocating the livestock grazing practice(s) that is (are) causing the adverse effect(s), or any other treatment as appropriate. Pages 24-25 of the EA describe the affected environment and impacts of the proposed action and alternatives on cultural resources.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)). Within the allotment there are no known populations of threatened and endangered species, or designated critical habitat within the allotment.

10. The proposed activities will not threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). Page 9 of the EA describes the conformance with land use plans and relationships to statutes, regulations, or other plans.

APPROVED:

/s/ Kyle S. Arnold
Kyle S. Arnold
Assistant Field Manager, Resources, Roswell FO

06/08/2015

Date

/s/ Jeanette A. Martinez
Jeanette A. Martinez
Associate Field Manager, Carlsbad FO

06/10/2015

Date

United States Department of the Interior Bureau of Land Management

Environmental Assessment DOI-BLM-NM-P010-2015-0057-EA

Issuance of Term Grazing Permits on North Turkey Track - Allotment Number 65075 And South Turkey Track - Allotment Number 77075

U.S. Department of the Interior
Bureau of Land Management
Pecos District
Roswell Field Office
2909 West Second Street
Roswell, NM 88201-2019
Phone: (575) 627-0272
FAX: (575) 627-0276

Roswell Field Office

Confidentiality Policy

Any comments, including names and street addresses of respondents, you submit may be made available for public review. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.



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1.0 Purpose and Need for Action

1.1 Introduction

This environmental assessment is limited to the effects of issuing new grazing permits on allotment 65075 North Turkey Track and allotment 77075 South Turkey Track. Over time, the need could arise for subsequent management activities which relate to grazing authorization. These activities could include vegetation treatments (e.g., prescribed fires, herbicide projects), range improvement projects (e.g., fences, water developments), and others. Future rangeland management actions related to livestock grazing would be addressed in project-specific NEPA documents as they are proposed.

Though this environmental assessment specifically addresses the impacts of issuing grazing permits on the allotments, it does so within the context of overall BLM management goals. Allotment management activities would have to be coordinated with projects intended to achieve those other goals. For example, a vegetation treatment designed to enhance watershed condition or wildlife habitat may require rest from livestock grazing for one or more growing seasons. Requirements of this type would be written into the permits as terms and condition.

To qualify for a grazing permit the 43 Code of Federal Regulation (CFR) Section 4100 §4110.2-1(a) the authorized officer shall find land or water owned or control by an applicant to be base property if: (1) It is capable of serving as a base of operation for livestock use of public lands within a grazing district; or (2) It is contiguous land that is capable of being used in conjunction with a livestock operation which would utilize public lands outside of a grazing district. The current allotment 65075 lies inside of the Roswell Grazing District and is considered to be a "Section 03 allotment", requiring control of the waters. The owner of the private lands has sold a portion of the private lands which supports the base waters for the grazing on what is being proposed as South Turkey Track. He has proposed to split the allotment into two, one with 167,624 acres of public land which would become the North Turkey Track allotment (65075) and the remaining 59,867 acres of public land to be placed in the other allotment, South Turkey Track (77075).

The public land within the North Turkey Track allotment and the South Turkey Track allotment are located in the following Watersheds in Chaves and Eddy Countys:

1306000710 Long Arroyo
1306000709 Ishee Lake
1306001103 Pamilla Draw
1306000714 Rio Penasco
1306000713 Eagle Creek-Pecos River
1306001101 Burton Flat
1306001110 Dark Canyon-Pecos River

The North Turkey Track straddles NM 249, just east of Hagerman, NM. South Turkey Track is bisected by US Highway 82 east of Artesia, NM. See Location Map. Elevations range from about 3312 feet along the Pecos River along the western edges of the allotments to 4434 feet along the eastern edge of the allotments along "the Caprock".

The climate is semi-arid with normal annual temperatures ranging from 20⁰F to 95⁰F, extremes of 29 below zero to 103 degrees are also possible. Average annual precipitation is approximately 13-16 inches in the form of rainfall and snow.

Preparing Office:

Pecos District, Roswell Field Office
2909 W. Second Street
Roswell, NM 88201

1.2 Purpose and Need for Action

The purpose of issuing a new grazing permit would be to authorize livestock grazing on public range on Allotment #65075 North Turkey Track and Allotment #77075, South Turkey Track. The permits would be needed to specify the types and levels of use authorized, and the terms and conditions of the authorization pursuant to 43 CFR §§4130.3, 4130.3-1, 4130.3-2, and 4180.1.

1.3 Decision to be Made

The Decisions to be made upon the completion of this Environmental Assessment are: to issue Grazing permits which will authorize the grazing on Allotment 65075, North Turkey Track and 77075 South Turkey Track; to authorize the level of grazing on these allotments and to authorize the classes of livestock grazing on the allotments.

1.4 Conformance with Applicable Land Use Plan(s)

The proposed action conforms to the 1997 Roswell Approved Resource Management Plan (RMP) and Record of Decision; the 2008 Roswell Resource Management Plan Amendment and the 2000 New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management and Record of Decision as required by 43 CFR 1610.5-3.

1.5 Relationship to Statutes, Regulations or Other Plans

The proposal to issue the livestock grazing permits on these allotments is in conformance with the 1994 Environmental Impact Statement for Rangeland Reform; the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (TGA) (43 U.S.C. 315 et seq.); the Public Rangelands Improvement Act of 1978 (PRIA) (43 U.S.C. 1901 et seq.); Federal Cave Resources Protection Act of 1988.

1.6 Scoping, Public Involvement, and Issues

The applicant sold the base property for what would become the South Turkey Track allotment in April of 2015, and made his proposal to split the original allotment (65075, Turkey Track) at that time. The buyer of the portion now split off has made application for the grazing on Allotment 77075, South Turkey Track. The Roswell Field Office Specialists have reviewed the request and determined that the action should be considered.

2.0 Proposed Action and Alternative(s)

The BLM is proposing to issue a grazing permit on each of the allotments.

If the proposed action is selected the Decision will be implemented to offer a new term grazing permit on each of the allotments at the end of the Protest & Appeal Period. North Turkey Track, Allotment 65075 will continue to be administered by the Roswell Field Office. South Turkey Track, Allotment 77075 will be administered by the Carlsbad Field Office as all of this allotment now falls within Eddy County.

Table 1. Animal Units/Animal Unit Months							
Allotment Number	Allotment Name	Acres of Public Land	Percent Public Land	Animal Units Authorized	Animal Unit Months Authorized	Livestock	Livestock Number
65075	North Turkey Track	167,625	58%	2964	20629	Cattle	2964
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65075	TOTAL			2984	20768		2984
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				20	96	Horses	20
	TOTAL			1600	7680		1600

See Attached Maps.

2.1 Alternatives Considered by Not Analyzed in Detail

Grazing with reduced numbers – BLM considered authorizing grazing with reduced numbers on these allotments. Grazing with reduced numbers would produce impacts similar to the proposed action. Additionally, the allotments meet the Standard for Public Land Health and monitoring studies do not indicate changes are necessary. Therefore, BLM will not analyze this alternative.

2.2 No Grazing Alternative

Under this alternative a new grazing permit would not be issued for these allotments. No grazing would be authorized on federal land on these allotments under this alternative. Under this alternative and based on the land status pattern within the allotments, new fences would be required to exclude grazing on the federal land.

3.0 Affected Environment, Environmental Consequences, and Cumulative Impacts

During the analysis process, the interdisciplinary team considered several resources and supplemental authorities. The interdisciplinary team determined that the resources discussed below would be affected by the proposed action.

The following resources or values are not present or would not be affected by the authorization of livestock grazing on these allotments: Native American Religious Concerns, Flood plains, Recreation, Visual Resources, Prime or Unique Farmland, Minority/Low Income Populations, Public Health and Safety, Realty, Solid Mineral Resources, Fluid Mineral Resources, Hazardous or Solid Wastes, Wetlands, Wild and Scenic Rivers, and Wilderness.

Cultural resources are not usually adversely affected by livestock grazing, although concentrated livestock activity such as around livestock water troughs can have adverse effects on the cultural resource. Prior to authorizing range improvements, a Class III Cultural Survey must be completed ensuring cultural resources will not be affected. There are several known cultural resources within these allotments. Affected resources and the impacts resulting from livestock grazing are described below.

3.1 Soil / Water / Air

➤ Climate

Affected Environment

Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. GHG's and the potential effects of GHG emissions on climate are not regulated by the EPA, however climate has the potential to influence renewable and non-renewable resource management.

Greenhouse gases, including carbon dioxide (CO₂) and methane (CH₄), and the potential effects of GHG emissions on climate, are not regulated by the EPA under the Clean Air Act. However, climate has the potential to influence renewable and non-renewable resource management. The EPA's Inventory of US Greenhouse Gas Emissions and Sinks found that in 2006, total US GHG emissions were over 6 billion metric tons and that total US GHG emissions have increased by 14.1% from 1990 to 2006. The report also noted that GHG emissions fell by 1.5% from 2005 to 2006. This decrease was, in part, attributed to the increased use of natural gas and other alternatives to burning coal in electric power generation.

The levels of these GHGs are expected to continue increasing. The rate of increase is expected to slow as greater awareness of the potential environmental and economic costs associated with increased levels of GHG's result in behavioral and industrial adaptations.

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 (Goddard Institute for Space Studies, 2007). However, observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and

change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) predicted that by the year 2100, global average surface temperatures would increase 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences (2006) supports these predictions, but has acknowledged that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

A 2007 US Government Accountability Office (GAO) Report on Climate Change found that, "federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others: 1) physical effects such as droughts, floods, glacial melting, and sea level rise; 2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and 3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses." It is not, however, possible to predict with any certainty regional or site specific effects on climate relative to the proposed permits and subsequent actions.

In New Mexico, a recent study indicated that the mean annual temperatures have exceeded the global averages by nearly 50% since the 1970's (Enquist and Gori). Similar to trends in national data, increases in mean winter temperatures in the southwest have contributed to this rise. When compared to baseline information, periods between 1991 and 2005 show temperature increases in over 95% of the geographical area of New Mexico. Warming is greatest in the northwestern, central, and southwestern parts of the state.

Impacts from the No Action (Proposed Action) Alternative

Direct and Indirect Impacts

Climate change analyses are comprised of several factors, including greenhouse gases (GHGs), land use management practices, the albino effect, etc. The tools necessary to quantify climatic impacts from the Proposed Action are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined. Additionally, specific levels of significance have not yet been established. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that may contribute to climate change. Qualitative and/or quantitative evaluation of potential contributing factors within the planning area is included where appropriate and practicable.

Impacts from the No Grazing Action

Direct and Indirect Impacts

There will be no direct or indirect impacts to climate if a no grazing action is selected.

Cumulative Impacts of all Alternatives

The incremental impact of issuing a grazing permit on climate resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts on climate resources would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meet the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities.

➤ Soils

The Soil Conservation Service, now the Natural Resource Conservation Service (NRCS), has surveyed the soils in Chaves County. Complete soil information is available in the Soil Survey of Chaves County, New Mexico, Southern Part (USDA Soil Conservation Service 1980) and online at <http://websoilsurvey.nrcs.usda.gov/app/>. The soil map units represented in the project area are:

Alama loam, 0 to 3 percent slopes (Aa) Runoff soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is slight.

Berino-Cacique association, 0 to 3 percent slopes (BE) Runoff of the Berino soil is very slow and the hazard of water erosion is slight and the hazard of soil blowing is moderate. Runoff of the Cacique soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is moderate.

Berino-Pintura complex, 0 to 15 percent slopes (Bf) Runoff of the Berino soil is very slow and the hazard of water erosion is slight and the hazard of soil blowing is moderate. Runoff of the Cacique soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is moderate.

Faskin – Malstrom association, 0 to 3 percent slopes (Fm) Runoff is slow or very slow and the hazard of water erosion is slight and soil blowing is severe.

Faskin – Roswell complex, 0 to 15 percent slopes (Fr) Runoff is medium and the hazard of water erosion is slight and soil blowing is moderate.

Holloman-Gypsum land complex, 3 to 5 percent slopes (HrC) The gently sloping Holloman soils are in depressions. The undulating Gypsum land is on small very low knolls. Runoff of the Holloman unit soil is medium and the hazard of water erosion and soil blowing are moderate. Runoff is rapid, the hazard of water erosion is moderate, and the hazard of soil blowing is severe for the Gypsum land.

Ima fine sandy loam, 1 to 5 percent slopes (Im) Permeability is moderately rapid. Runoff is medium or slow. The hazard of water erosion is severe.

Jal fine sandy loam, 0 to 3 percent slopes (Ja) Permeability is moderate. Runoff is medium to slow. The hazard of water erosion is slight and the hazard of soil blowing is moderate.

Pajarito-Pintura complex, 1 to 15 percent slopes (Pb) Runoff is medium to slow and the hazard of water erosion is moderate and soil blowing is severe.

Reeves Holloman association, 0 to 5 percent slopes (RI) Runoff is medium and the hazard of water erosion and soil blowing are moderate.

Roswell-Jalmar complex, 0 to 15 percent slopes (Rn) Runoff of the unit soil is very slow and the hazard of water erosion is slight and the hazard of soil blowing is severe.

Sotim fine sandy loam, 0 to 3 percent slopes (So) Runoff of the soil is medium and the hazard of water erosion and the hazard of soil blowing is moderate.

Tencee gravelly loam, 1 to 9 percent slopes (Te) Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is slight.

Torriorthents, Very Steep, 30 to 80 percent slopes (TOF) Runoff is very rapid. The hazard of water erosion is severe.

Tencee-Sotim association, 0 to 9 percent slopes (TS) The hazard of water erosion is moderate and the hazard of soil blowing is slight for Tencee soils. The hazards of water erosion and soil blowing are moderate for Sotim soils. Runoff is medium.

The Soil Conservation Service, now the Natural Resource Conservation Service (NRCS), has surveyed the soils in Eddy County. Complete soil information is available in the Soil Survey of Eddy County, (USDA Soil Conservation Service 1971) and online at <http://websoilsurvey.nrcs.usda.gov/app/>. The soil map units represented in the project area are:

Active Dune Land, (AD) Blowouts are common and active dunes form from the shifting sand.

Berino complex, 0 to 3 percent slopes (BB) Permeability is rapid. The hazard to wind erosion is severe.

Berino-Dune land complex, 0 to 3 percent slopes (BD) Permeability is rapid. The soil is highly susceptible to wind erosion.

Cacique loamy sand, 0 to 3 percent slopes, eroded (CA) Permeability is rapid in the surface layer and moderate in the subsoil. The water holding capacity is moderate.

Ector extremely rocky loam, 9 to 25 percent slopes (EE) Permeability is moderate, and the water holding capacity is very low to low. Runoff is rapid after the soils become saturated.

Gypsum land-Cottonwood complex, 0 to 3 percent slopes (GC) Surface runoff is rapid to very rapid. The water holding capacity is very low.

Gypsum land-Reeves complex, 0 to 3 percent slopes, eroded (GR) Permeability is rapid in the surface layer of the soils and in the low dunes. Surface runoff is rapid to very rapid. The water holding capacity is very low.

Kermit-Berino fine sands, 0 to 3 percent slopes (KM) Permeability is very rapid. The soil is highly susceptible to wind erosion.

Kimibrough-Stegall loams, 0 to 3 percent slopes (Kt) Permeability is moderate and the water holding capacity is very low. Runoff is slow.

Largo loam, 1 to 5 percent slopes (LA) Permeability is moderate, and the water holding capacity is high. Runoff is medium.

Largo silt loam, overflow, 0 to 1 percent slopes (LG) Permeability is moderate, and the water holding capacity is high. Runoff is medium.

Largo-Stoney land complex, 0 to 25 percent slopes (LN) Permeability is moderate, and the water-holding capacity is high. Runoff is medium.

Likes loamy fine sand, 1 to 5 percent slopes (LS) Permeability is rapid. The soil is highly susceptible to wind and water erosion. Runoff from adjoining uplands is rapid.

Mobeetie fine sandy loam, 1 to 5 percent slopes (MO) Permeability is moderately rapid, and the water holding capacity is moderately high.

Pajarito-Dune land complex, 0 to 3 percent slopes (PD) Permeability is moderately rapid, and the water-holding capacity is moderate.

Potter-Simona complex, 5 to 25 percent slope (PS) Permeability is moderate. Runoff is medium to rapid.

Reagan loam, 0 to 3 percent slopes (RA) Permeability is moderate, and the water holding capacity is high. Runoff is slow.

Reeves-Gypsum land complex, 0 to 3 percent slopes (RG) Permeability is moderate, and the water holding capacity is low to moderate.

Reeves loam, 0 to 1 percent slopes (RI) Permeability is moderate, and the water holding capacity is low to moderate.

Rock Land, steep to vertical slopes (RO) Surface water is lacking, but runoff from these areas provides water for lower lying areas.

Simona sandy loam, 0 to 3 percent slopes (SA) Permeability is moderately rapid, and the water holding capacity is low. Runoff is low.

Simona gravelly fine sandy loam, 0 to 3 percent slopes (SG) Permeability is moderately rapid and the water holding capacity is low.

Simona-Bippus complex, 0 to 5 percent slopes (SM) Permeability is moderately rapid, and the water holding capacity is low. Runoff is slow.

Simona and Wink fine sandy loams, 0 to 3 percent slopes, eroded (SN) Permeability is moderately rapid, but the water holding capacity is low. Runoff is slow.

Tonuco loamy fine sand, 0 to 3 percent slopes (TF) *Permeability is rapid. Tonuco soils* are subject to severe wind erosion if the vegetative cover is seriously depleted. Runoff is very slow.

Tonuco loamy fine sand, 0 to 3 percent slopes (TN) Permeability is rapid. The water holding capacity is very low, and the soils are droughty.

Upton gravelly loam, 0 to 9 percent slopes (UG) Permeability is moderate. The water holding capacity is low to very low, and the soils are droughty. Runoff is slow to medium.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Under the No Action (Proposed) Alternative, livestock would remove some of the cover of standing vegetation and litter, and compact the soil by trampling. If livestock management were inadequate, these effects could be severe enough to reduce infiltration rates and increase runoff, leading to greater water erosion and soil losses (Moore et al. 1979, Stoddart et al. 1975). Producing forage and protecting the soil from further erosion would then be more difficult. The greatest impacts of removing vegetation and trampling would be expected in areas of concentrated livestock use, such as trails, waters, feeders, and shade.

Under the No Action Alternative, rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion. Low/moderate forage quality plants provide protection to the soils resource.

Impacts from the No Grazing Action

Direct and Indirect Impacts

Under No-Grazing Alternative, any adverse impact from livestock grazing would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

Cumulative Impacts of all Alternatives

The incremental impact of issuing a grazing permit on soil resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts would be eliminated to soil resources, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Cumulative long term monitoring data reflect the soils are being adequately protected.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Continued rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion.

➤ Air Quality

Affected Environment

The Environmental Protection Agency (EPA) has the primary responsibility for regulating air quality, including seven nationally regulated ambient air pollutants. Regulation of air quality is also delegated to some states. Air quality is determined by atmospheric pollutants and chemistry, dispersion meteorology and terrain, and also includes applications of noise, smoke management, and visibility.

The allotments are in an area that is considered a Class II air quality area. A Class II area allows moderate amounts air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed soil and exhaust emissions from motorized equipment. Air quality in the

area is generally good and is not located in any of the areas designated by the Environmental Protection Agency as “non-attainment areas” for any listed pollutants regulated by the Clean Air Act.

Air quality in the region is generally good, with winds averaging 10-16 miles per hour depending on the season. Peak velocities reach more than 50 miles per hour in the spring. These conditions rapidly disperse air pollutants in the region.

Impacts from the No Action (Proposed) Alternative

➤ Direct and Indirect Impacts

Air quality would temporary be directly impacted with pollution from enteric fermentation (ruminant livestock), chemical odors, and dust. Dust levels resulting from allotment management activities would be slightly higher under the Proposed Action than No-Grazing Alternative. The cumulative impact on air quality from the allotment would be negligible compared to all pollution sources in the region.

The federal Clean Air Act requires that air pollutant emissions be controlled from all significant sources in areas that do not meet the national ambient Air quality standards. The New Mexico Air Quality Bureau (NMAQB) is responsible for enforcing the state and national ambient air quality standards in New Mexico. Any emission source must comply with the NMAQB regulations. At the present time, the counties that lie within the jurisdictional boundaries of the Roswell Field Office are classified as in attainment of all state and national ambient air quality standards as defined in the Clean Air Act of 1972, as amended (USDI, BLM 2003b).

The Environmental Protection Agency (EPA), on October 17, 2006, issued a final ruling on the lowering of the National Ambient Air Quality Standard (NAAQS) for particulate matter ranging from 2.5 micron or smaller particle size. This ruling became effective on December 18, 2006, stating that the 24-hour standard for PM_{2.5}, was lowered to 35 ug/m³ from the previous standard of 65 ug/m³. This revised PM_{2.5} daily NAAQS was promulgated to better protect the public from short-term particle exposure. The significant threshold of 35 ug/m³ daily PM_{2.5} NAAQS is not expected to be exceeded under the proposed action.

Impacts from the No Grazing Action

➤ Direct and Indirect Impacts

There will be no direct or indirect impacts to climate if a no grazing action is selected.

Cumulative Impacts of all Alternatives

The incremental impact of issuing a grazing permit on air resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and

gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts on air resources would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities.

➤ Watershed Hydrology

Affected Environment

The watershed and hydrology in the area is affected by land and water use practices. The degree to which hydrologic processes are affected by land and water use depends on the location, extent, timing and the type of activity. Factors that currently cause short-lived alterations to the hydrologic regime in the area include livestock grazing management, recreational use activities, groundwater pumping and also oil and gas developments such as well pads, permanent roads, temporary roads, pipelines, and powerlines.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Livestock grazing management and range improvement projects can result in long-term and short-term alterations to the hydrologic regime. Peak flow and low flow of perennial streams, ephemeral, and intermittent rivers and streams would be directly affected by an increase in impervious surfaces resulting from the construction of the well pad and road. The potential hydrologic effects to peak flow is reduced infiltration where surface flows can move more quickly to perennial or ephemeral rivers and streams, causing peak flow to occur earlier and to be larger. Increased magnitude and volume of peak flow can cause bank erosion, channel widening, downward incision, and disconnection from the floodplain. The potential hydrologic effects to low flow is reduced surface storage and groundwater recharge, resulting in reduced baseflow to perennial, ephemeral, and intermittent rivers and streams. The direct impact would be that hydrologic processes may be altered where the perennial, ephemeral, and intermittent river and stream system responds by changing physical parameters, such as channel configuration. These changes may in turn impact chemical parameters and ultimately the aquatic ecosystem.

Long-term direct and indirect impacts to the watershed and hydrology would continue for the life of the livestock grazing management and range improvement projects and would decrease once reclamation of the range improvement projects has taken place. Short-term direct and indirect impacts

to the watershed and hydrology from access roads that are not surfaced with material would occur and would likely decrease in time due to reclamation efforts.

Under the Proposed Action, rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the hydrologic regime. Low/moderate forage quality plants provide protection to the soils resource and hydrologic regime. Cumulative long-term monitoring data reflect the hydrologic regime is being adequately protected.

Impacts from the No Grazing Action

Direct and Indirect Impacts

Under the No-Grazing Alternative, any adverse impact from livestock grazing management and range improvement projects would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

Cumulative Impacts of All Alternatives

The incremental impact of issuing a grazing permit on watershed hydrology resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts on watershed hydrology resources would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities.

➤ **Floodplains**

Affected Environment

Portions of the grazing allotment are located in the 100-year floodplain. For administrative purposes, the 100-year floodplain serves as the basis for floodplain management on public lands. It is based on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (1983) which describes a Zone A as the “Area of the 100-year flood”. Current development on the floodplain consists of two-track roads, water pipelines and boundary fence in the area.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Surface disturbance from the development of surface facilities and buried pipelines can result in impairment of the floodplain values from removal of vegetation, removal of wildlife habitat, impairment of water quality, decreased flood water retention and decreased groundwater recharge.

Under the Proposed Action rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the floodplain values. Low/moderate forage quality plants provide protection to the floodplain values. Cumulative long-term monitoring data reflect the floodplain values are being adequately protected.

Impacts from the No Grazing Action

Direct and Indirect Impacts

Under the No Grazing Alternative, any adverse impact from livestock grazing would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

Cumulative Impacts of All Alternatives

The incremental impact of issuing a grazing permit on floodplain resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts on floodplain resources would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Continued rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion.

➤ Water Quality - Surface

Affected Environment

No perennial surface water is found on the Public Land on this allotment. Ephemeral stream occur on Public Land on this allotment.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Direct impacts to surface water quality would be minor, short-term impacts during stormflow events. Indirect impacts to water-quality related resources, such as fisheries, would not occur.

Impacts from the No Grazing Action

Direct and Indirect Impacts

There will be no direct or indirect impacts to surface water quality if a no grazing action is selected.

Cumulative Impacts of all Alternatives

The incremental impact of issuing a grazing permit on surface water resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts on surface water resources would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities.

➤ Water Quality - Ground

Affected Environment

Fresh water sources are located in the Quaternary Shallow Alluvial. The approximate depth to water in area ranges from 100 to 150 feet in the shallow Quaternary Alluvial Aquifer (New Mexico Office of the State Engineer Data and Geohydrology and Associates Chaves County Groundwater Table Map).

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

The proposed action would not have a significant effect on ground water. Livestock would be dispersed over the allotment, and the soil would filter potential contaminants.

Under the Proposed Action and Alternative B, the Preferred Alternative, rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect surface and groundwater. Low/moderate forage quality plants provide protection to the surface and groundwater. Cumulative long-term monitoring data reflect the surface and groundwater are being adequately protected.

Under the No-Grazing Alternative, any adverse impact from livestock grazing would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

Impacts from the No Grazing Action

Direct and Indirect Impacts

There will be no direct or indirect impacts to ground water quality if a no grazing action is selected.

Cumulative Impacts of all Alternatives

The incremental impact of issuing a grazing permit on groundwater resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in this area; oil and gas activities on the uplands; rights-of way crossing the area; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

If the No-Grazing Alternative were chosen, some adverse cumulative impacts on groundwater resources would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities.

3.2 Archaeology

➤ Cultural and Historical Resource

Affected Environment

The project falls within the Southeastern New Mexico Archaeological Region. This region contains the following cultural/temporal periods: Paleoindian (ca. 12,000-8,000 B.C.), Archaic (ca. 8000 B.C. –A.D. 950), Ceramic (ca. A.D. 600-1540) Protohistoric and Spanish Colonial (ca. A.D. 1400-1821), and Mexican and American Historical (ca. A.D. 1822 to early 20th century). Sites representing any or all of these periods are known to occur within the region. A more complete discussion can be found in *Living on the Land: 11,000 Years of Human Adaptation in Southeastern New Mexico an Overview of Cultural Resources in the Roswell District*, Bureau of Land Management published in 1989 by the U.S. Department of the Interior, Bureau of Land Management.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Concerning cultural resources, grazing has the potential for impacts. The Roswell Field Office reviews the local office and NMCRIS databases for every grazing permit or leasing action at all levels of NEPA. In situations where sensitive sites lie within an allotment, site specific visits may be conducted to assess the presence of effects. Seventy plus surveys and one hundred plus sites have been reported in both these allotments. Twelve sites were visited to assess impacts from grazing (13-R-004A). Minimal or no impacts were present.

Impacts from the No Grazing Action

Direct and Indirect Impacts

There will be no direct or indirect impacts to cultural resources if a no action alternative is selected.

Cumulative Impacts of all alternatives

There is no evidence that grazing activities at this intensity has adversely impacted any cultural resources; however, unforeseen impacts may occur. There will be no cumulative impacts to cultural resources if a no action alternative is selected.

Mitigation Measures and Residual Impacts of all alternatives

The cattle numbers will not increase when this allotment is split; therefore, no mitigation measures are planned and no residual impacts are anticipated to cultural resources if a no grazing action is selected

➤ Native American Religious Concerns

Affected Environment

Native American groups may have places that can be described as Traditional Cultural Properties or other places that are important to their religions or cultures. The BLM uses the New Mexico Department of Cultural Affairs list of tribes/nations/pueblos concerned for individual counties to determine which of these groups may have concerns for projects. To date, the areas to be affected by the current project have not been identified by interested tribes as being of tribal concern.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

The BLM conducts tribal consultation for many projects while preparing planning documents such as the Resource Management Plan and Resource Management Plan Addendums. A review of existing information indicates the proposed action is outside any known Traditional Cultural Property.

Cumulative Impacts

No cumulative impacts are anticipated based on a review of existing information.

Mitigation Measures and Residual Impacts

No mitigation measures are planned and no residual impacts are anticipated at this time.

Impacts from the No Grazing Action

Direct and Indirect Impacts

There will be no direct or indirect impacts to Native American Religious Concerns if a no action alternative is selected.

Cumulative Impacts

There will be no cumulative impacts to Native American Religious Concerns if a no action alternative is selected.

Mitigation Measures and Residual Impacts

There will be no mitigation measures and residual impacts for Native American Religious Concerns if a no grazing action is selected.

3.3 Range

➤ Vegetation

Affected Environment

The allotments are comprised of predominately three vegetation community types arranged in a mosaic over the allotments. Shinnery Oak Dune, Grassland and Mixed Desert Shrub communities dominate. General objectives or guidelines for each vegetation community are described in the Roswell Approved RMP and Record of Decision (BLM 1997) and the Roswell Draft RMP/EIS (BLM 1994). The primary features in the SOD community are topography influenced by aeolian and alluvial sedimentation on upland plains forming hummocks, dunes, sand ridges and swales and presence of shinnery oak (*Quercus havardii*). This is a unique community type found primarily below the Llano Estacado or Staked

Plains, in an area known as Mescalero Sands. Topography is gently sloping and undulating sandy plains, with moderate to very steep hummocky dunes of up to ten feet and more in height scattered throughout. Some dunes are stabilized with vegetation, while a number of them are unstable and shifting. Dune blowouts with shinnery oak and bluestem (*Andropogon* spp.) either isolated or in dune complexes are common in this community.

A distinguishing feature for the Grassland community is that grass species typically comprises 75% or more of the potential plant community. This community also includes shrub, half-shrub, and forb species. The percentages of grasses, forbs, and shrubs actually found at a particular location will vary with recent weather factors, past resource uses and the potential of the site. The Grassland community is found predominately on the western edge of the allotment.

Grasslands are intermixed with all community types. In general, sand dropseed, three-awn, black grama, bush muhly and fluffgrass are common in the sandy uplands. Alkali sacaton is the dominant species in the bottomlands where it is interspersed with saltcedar. Tobosa is found in both sandy uplands and bottomlands. Grassland sites also have a mesquite or broom snakeweed shrub component. Blue grama is primarily found on loamy soils and black grama on more gravelly soils. Grassland communities on the uplands and shallow breaks support a large percentage of shrub species. Mesquite, broom snakeweed, fourwing saltbush, and yucca are common shrub species. The primary grasses are sand dropseed and bush muhly, bush muhly, vine mesquite and black grama.

The Mixed Desert Shrub community is primarily made up of desert grasses, shrubs and cacti. The predominant shrub species include creosote, mesquite, tarbush, saltbush, little leaf sumac, and sage. Common cacti encountered are claret cup, cholla, prickly pear, and eagle claw. Forbs include plantain, globe mallow, and buckwheat. Grasses include fluffgrass, sideoats grama, black grama, dropseed, and galleta.

The Rangeland Health assessment indicates a problem with invasive plants, most notably mesquite. Mesquite dominates the deep sand ecological sites and affects both the plant community and hydrologic functions of these sites.

Rangeland monitoring studies have been established in fifty-two key areas within the allotments; 34 are located within North Turkey Track and 18 are located within South Turkey Track. The studies are located within the following ecological sites: Deep Sand CP-2, Shallow Sand SD-3, Shallow SD-3, Sandy SD-3, Loamy SD-3, Deep Sand SD-3, Gyp Upland SD-3 and a Sandy HP-3. These permanent study locations are used to track vegetation changes and to determine proper stocking rates. The vegetative studies were initially placed in the late 1970's and monitoring data has been collected periodically over the last 30 years.

The description for these ecological sites was developed by the Soil Conservation Service (now referred to as the National Resource Conservation Service) in their ecological site guides. Ecological site descriptions are available for review at the Roswell BLM office, any Natural Resources Conservation Service office or accessed at www.nm.nrcs.usda.gov. From 1978 to current times agencies were using the traditional range condition methodology to depict range condition. This compared collected rangeland monitoring information with the potential vegetation community in terms of species composition by weight. The rating is based on a scaled of 0 to 100 with 100 being the actual representative site.

Rangeland Health Assessment data was collected in fiscal year 2012. Analysis of the rangeland health assessments indicates that all three indicators (biotic, hydrology, and soils) have been met for the allotments.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Under Alternative A the vegetation in the Grassland community will continue to be grazed and trampled by domestic livestock as well as other herbivores. The area has been grazed by livestock since the early part of the 1900's, if not longer. Ecological condition and trend is expected to remain stable and/or improve over the long term at the permitted number of livestock.

Upland sites would reflect a static ecological condition trend at the existing permit level. Some grassland areas would remain static due to the influence of juniper, mesquite and cholla. In the long term, juniper or mesquite treatments may be necessary to ebb the encroachment onto historical grassland sites.

Range monitoring data indicate that the vegetation is sustainable to meet multiple resource requirements and forage at the permitted use level under the Alternative A Proposed Action. Data indicate that livestock grazing is compatible with vegetation cover and composition objectives. In addition to the static trend in ecological condition, monitoring data show the vegetative resources have been maintained and sustained since monitoring began in 1981.

Impacts from the No Grazing Action

Direct and Indirect Impacts

Under the No-Grazing Alternative, no impacts to vegetation resources would occur on public lands from authorized livestock grazing. Vegetation cover would increase over the long term in some areas. Grasslands in the uplands would increase in cover and composition, but composition would be tempered by juniper or mesquite somewhat dominating the shrub component. Spike dropseed would, in the short term, increase in cover and composition but would then taper off in the long term, becoming decadent from the lack of standing vegetation removal by grazing.

Cumulative Impacts

Excluding livestock or reducing stocking rates could benefit vegetation in the short term, in those areas proposed for livestock grazing restrictions. Eliminating livestock grazing pressure would allow plants to regain vigor and would increase forage production in the short term. An overall increase in the density of vegetation could occur, followed by a subsequent increase in vegetative litter. In the long term, vegetative production would decline slightly as litter builds up and plants become decadent. Increased litter would indirectly benefit vegetation by slowing precipitation runoff and holding moisture on the ground for longer periods. Properly managed grazing would be beneficial because it stimulated plant growth in healthy vegetative communities.

Mitigation Measures and Residual Impacts

Vegetation monitoring studies will continue if new grazing permits were issued under the Proposed Action. Changes to livestock management would be made if monitoring data showed adverse impacts to the vegetation.

➤ **Livestock Grazing**

Affected Environment

In the past, the original allotment has been permitted to be grazed yearlong by cattle, with only enough horses required to work stock. The permit authorized 4621 Aus yearlong/28,623 Animal unit months Active use. Grazing is by a cow/calf operation. Stock are generally on the allotment from March 1 to February 28 and were rotated through the 50 plus pastures.

The allotment contained about 390020 total acres (see Location Map). Landownership consisted of approximately 64,192 acres of private land, 227,492 acres of federal land, and 98,376 acres of state land. Current range improvement projects for the management of livestock include earthen tanks, wells, and drinking troughs with associated pipelines, pasture and boundary fences and corrals.

Splitting of the original allotment will result in the North Turkey Track containing 37,896 acres of private land, 167,625 acres of public land and 48,795 acres of state leased lands. South Turkey Track will contain 26,296 acres of private land, 59,867 acres of public land and 49,621 acres of state leased lands.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Under Alternative A, Proposed (No Action) Alternative, livestock would continue to graze public lands within the allotments. Existing pasture configurations and water developments would remain the same within each allotment. Livestock management would still follow the multiple-herd rotation system or in dry conditions would be scattered across the allotments.

Impacts from the No Grazing Action

Direct and Indirect Impacts

Under No-Grazing Alternative, there would be no livestock grazing authorized on public lands. The public lands would have to be fenced apart from the private lands or livestock would be considered in trespass if found grazing on public land (43 CFR 4140.1(b)(1)). Exclusion of livestock from the public land would require approximately 512.78 miles of new fence at an approximate cost of \$230,751.00 (\$4,500/mile). This expense would be borne by the private landowners. Range improvements on public land would not be maintained and the BLM would have to compensate the permittees if any of the improvements were cost shared at the time of their authorization.

Under No-Grazing Alternative, the overall livestock operation could be reduced by a total of 2,356 AUs (those attached to the public lands) to approximately 2,194 AUs. This would have an adverse economic

impact on the permittees and Chaves and Eddy County would lose the tax revenue for the stock associated with the public lands.

Cumulative Impacts

The incremental impact of issuing a grazing permit on these resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in the area, oil and gas activities on the uplands, rights-of-way crossing the area and recreational use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state or private lands.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activity began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future.

The analysis of cumulative impacts is driven by major resource issues. The proposed action is the authorization of livestock grazing on these allotments. The cumulative impacts to these allotments and adjacent allotments are insignificant.

Mitigation Measures and Residual Impacts

If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken at that time to migrate those impacts.

Cumulative impacts of the grazing and no grazing alternatives were analyzed in Rangeland Reform '94 Draft Environmental Impact Statement (BLM and USDA Forest Service 1994) and in the Roswell Resource Area Draft RMP/EIS (BLM 1994). The "no livestock grazing alternative" was not selected in either document. If the No Grazing Alternative were chosen, some adverse cumulative impacts would be eliminated, but other would occur. Grazing would be no longer available as a vegetative management tool, and BLM lands within the allotments would be less intensively managed.

Residual impacts are direct, indirect or cumulative impacts that would remain after applying the mitigation measures. Residual impacts following authorizing livestock grazing would be insignificant if the mitigation measures are properly applied.

Invasive, Non-Native Species

Affected Environment

Noxious weeds affect both crops and native plant species in the same way, by out-competing for light, water and soil nutrients. Losses are attributed to decreased quality and quantity of agricultural products due to high levels of competition from noxious weeds and infestations. Noxious weeds can negatively affect livestock productivity by making forage unpalatable to livestock thus decreasing livestock productivity and potentially increasing producer's feed costs. Potential noxious weed species include musk thistle and Russian knapweed. Potential noxious weed species include African rue, non-

native thistles (*Cirsium* spp.), leafy spurge, and goldenrod. There are known populations of African rue on surrounding allotments therefore monitoring for noxious weeds on the allotment is necessary.

3.4 Wildlife Biology

➤ Wildlife

Affected Environment

This allotment provides a variety of habitat types for terrestrial wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of a mixture of grassland habitat and mixed desert shrub vegetation.

Avian species potentially occurring within this allotment based on the presence of suitable habitat include the lesser prairie-chicken, bobwhite quail, scaled quail, mourning dove, white-winged dove, road runner, western king bird, scissor-tailed flycatcher, ash-throated flycatcher, pyrrhuloxia, Scott's oriole, Bullock's oriole, Chihuahuan raven, turkey vulture, Harris' hawk, northern harrier, prairie falcon, Swainson's hawk, Ferruginous hawk, red-tailed hawk, golden eagle, merlin, American kestrel, barn owl, great horned owl, burrowing owl, lesser night hawk, various hummingbirds, horned larks, lark bunting, logger-headed shrike, cactus wren, western tanager, curve-billed thrasher, mocking bird, various warblers and sparrows.

Mammals known to occur throughout the allotment include various bats, mule deer, pronghorn antelope, javelina, desert cottontail, black-tailed jackrabbit, spotted ground squirrel, pocket gopher, porcupine, coyote, gray fox, bobcat, raccoon, striped and spotted skunk, wood rat and various other small rodents. Resident bats in the area tend to be Townsend's Western Big-eared (*Corynorhinus townsendii*), Cave Bat (*Myotis velifer*), Small-footed Bat (*Myotis celiolabrum*) and Mexican Freetail (*Tadarida brasiliensis*). None of these bat species are threatened or endangered. This is not a complete list, as there are other mammal species that are highly likely to occur on these allotments.

Herptofauna (reptiles and amphibians) potentially associated with the allotment include the Couch's spadefoot toad, green toad, Red-spotted toad, plains leopard frog, collared lizard, Texas horned lizard, short-horned lizard, roundtail horned lizard, prairie lizard, Texas spotted whiptail, six-lined racerunner, western whiptail, little striped whiptail, great plains skink, leopard lizard, lesser earless lizard, Dunes sagebrush lizard, side-blotched lizard, many lined skink, New Mexico milk snake, ringneck snake, Texas blind snake, glossy snake, longnose snake, plains black-headed snake, checkered garter snake, coachwhip, striped whipsnake, gopher snake, western hognose snake, common kingsnake, blackneck garter snake, western garter snake, western rattlesnake, massasauga and the western diamondback rattlesnake.

Cumulative Impacts

The cumulative impacts from year round grazing with no management or reduction in numbers during drought years could have an impact on wildlife. Reducing cover and forage under the 45% utilization of current year's growth would stress wildlife populations and cause them to seek out new habitat. This would stress surrounding areas and cause an increase in competition for resources.

Mitigation

Adhere to the RMPA utilizing 45% of current year's growth of vegetation and actively manage livestock.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

Under the Proposed Action (Alternative A), livestock grazing management and range improvement projects designed with consideration for wildlife would generally enhance the quality of wildlife habitat. Vegetation condition, forage production, and habitat diversity would improve, and wildlife species distribution and abundance would increase. The construction of livestock waters in previously unwatered areas would promote increased wildlife distribution and abundance, but may potentially increase grazing pressure in those same areas. Short-term impacts of range improvement projects would be the temporary displacement of wildlife species during construction activities.

Impacts from the No Grazing Action

Under No-Grazing Alternative, there would no longer be direct competition between livestock and wildlife for forage, browse and cover. Wildlife habitat would moderately improve. The limitation for improvement would continue to be the existing invading species component (e.g., mesquite, snakeweed) affecting plant composition. Since livestock grazing would not be permitted, range improvement projects that benefit wildlife, such as water developments, would be abandoned. New range improvement projects that would also benefit wildlife habitat, such as brush control, may not be implemented because these projects are primarily driven and funded through range improvement efforts.

Threatened and Endangered Species / Special Status Species

Affected Environment

In accordance with BLM Manual 6840, BLM manages certain sensitive species not federally-listed as threatened or endangered in order to prevent or reduce the need to list them as threatened or endangered in the future. Included in this category are State-listed threatened or endangered species and federal candidate species which receive no special protections under the Endangered Species Act. A current list of State species and BLM sensitive species reviewed for this EA can be found on file at the Roswell Field Office which updates Appendix 11 of the Roswell Approved RMP (AP11- 3 & 4, respectively).

Under Section 7 of the Endangered Species Act of 1973 (as amended), BLM is required to consult with the U.S. Fish and Wildlife Service on any proposed action which may affect Federal listed threatened or endangered species or species proposed for listing. The Roswell Field Office wildlife biologist reviewed and determined the proposed actions are in compliance with the candidate conservation agreement (CCA, CP-GRAZ-001 public land) and (CCAA, CI-GRAZ-015 this agreement is for private and state lands). This CCA/A is currently tied to 65075. The new allotment 77075 will continue with the same stipulations but will have a new CP and CI number.

The Roswell Field Office received the concurrence letter from U.S. Fish and Wildlife Service on February 6th, 2015 for the effects determination of the Programmatic Biological Assessment for Livestock Grazing (Consultation Number 02ENNM00-2015-I-0175). The following text below is from the consultation concurrence letter.

There are many parts to the program, but this consultation focused on activities within habitat for the LPC, which include:

- Grazing permit issuance and renewal
- Livestock management
- Vegetation monitoring and rangeland health assessments
- Range improvements

The Service concurs with your determination of "may affect, not likely to adversely affect" the LPC, for the proposed projects. Our concurrence is based on the following understanding of your proposed project, along with the proposed conservation measures:

1. BLM will work to improve or maintain the allotment as suitable LPC habitat for the duration of the grazing permit.
2. All three Desired Plant Communities within the Pecos District can be managed to produce nesting and brood rearing habitat for the LPC.
3. Adherence to rangeland and grazing guidelines as described in the 2008 BLM Special Status Resource Management Plan Amendment (RMP A) at a minimum for ranch operations.
4. Grazing by any livestock will be deferred during the growing season for at least the 2 consecutive years following treatment. If vegetation response to treatment has been hindered due to drought or other factors additional deferments to ensure success of the treatment may be required.
5. Standard monitoring will be conducted annually in LPC habitat, usually when BLM staff surveys lek activity levels or conducts grazing compliance inspections.

6. On any type of allotment, implement grazing management plans intended to move towards the Desired Plant Community as adopted by the 2008 Special Status RMP A. This may include adjustment of stocking rates, implementing rest-rotation patterns, changing grazing intensity and duration, avoidance of nesting areas during nesting season, and contingency plans for varying prolonged weather patterns including drought.

7. Provide escape ramps in all open water sources related to grazing for LPC.

8. Range improvement projects will not be allowed if it is determined that the project could have negative impacts to the LPC or its habitat. This determination will be made in coordination between BLM and Service biologists.

- Brush control, fence, or livestock water projects were addressed in consultation number 02ENNM00-2014-I-0290.

If any of the following circumstances occur, the BLM will contact the Service, and discuss appropriate conservation measures:

- An allotment does not meet the grazing standards within occupied LPC habitat:
 - o Specifically, not meeting the vegetation and wildlife habitat categories of the Rangeland Health Assessment.
 - o The BLM determines livestock grazing to be the cause of the allotment not meeting the Standards.
 - o Either standard vegetation monitoring confirm the determination of the Rangeland Health Assessment.
- Before issuing a permit involving a transfer of an allotment located within LPC habitat when:
 - o The new owner does not agree to the terms of the previous permit.
 - o The allotment had been previously enrolled in a CCA and the new owner does not wish to continue the agreement.
- When the owner of an allotment with a CCA does not wish to continue the agreement and the permit is up for renewal.
 - o The BLM will use the conservation measures within their BA in the interim.

Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*) Federally Listed Species-Threatened

In New Mexico, the lesser prairie-chicken (LPC) formerly occupied a range that encompassed the easternmost one-third of the state, extending to the Pecos River, and 28 miles west of the Pecos near Fort Sumner. This covered about 15,000 mi². By the beginning of the 20th Century, populations still existed in nine eastern counties (Union, Harding, Chaves, De Baca, Quay, Curry, Roosevelt, Lea, and Eddy). The last reliable records from Union County are from 1993. Currently, populations exist only in parts of Lea, Eddy, Curry, Chaves, and Roosevelt counties, comprising about 23 percent of the historical range.

LPC are found throughout dry grasslands that contained shinnery oak or sand sage. Currently, they most commonly are found in sandy-soiled, mixed-grass vegetation, sometimes with short-grass habitats with clayey or loamy soils interspersed. They occasionally are found in farmland and smaller fields, especially in winter. Shinnery oak shoots are used as cover and produce acorns, which are important

food for LPC and many other species of birds, such as the scaled quail, northern bobwhite, and mourning dove. Current geographic range of shinnery oak is nearly congruent with that of the lesser prairie-chicken, and these species sometimes are considered ecological partners. Population densities of LPC are greater in shinnery oak habitat than in sand sage habitat.

LPC use a breeding system in which males form display groups. These groups perform mating displays on arenas called leks. During mating displays male vocalizations called booming, attract females to the lek. Leks are often on knolls, ridges, or other raised areas, but in New Mexico leks are just as likely to be on flat areas such as roads, abandoned oil drill pads, dry playa lakes or at the center of wide, shallow depressions. Leks may be completely bare, covered with short grass, or have scattered clumps of grass or short tufts of plants. An important physical requirement for location of leks is visibility of surroundings, but the most important consideration is proximity of suitable nesting habitat, breeding females and the ability to hear male vocalizations.

On December 11, 2012 the USFWS proposed to list the lesser prairie-chicken as a threatened species under the ESA of 1973, as amended. The final rule to list the lesser prairie-chicken as threatened was published in the *Federal Register* on April 10, 2014, and was effective as of May 12, 2014.

Threatened and Endangered Species

Direct and Indirect Effects

Lesser prairie-chicken

Grazing is one of the dominant land uses on public and private lands throughout the range of LPCs. The evolutionary history of the mixed-grass prairie resulted in endemic bird species adapted to a mosaic of lightly to heavily grazed areas (Bragg and Steuter 1996; Knopf and Samson 1997). In some areas within LPC range where heavy grazing has removed tallgrass and midgrass cover, insufficient amount of lightly grazed habitat is available to support successful nesting (Jackson and DeArment 1963; Davis et al. 1979; Crawford 1980; Taylor and Guthery 1980; Davies 1992). Uniform or widespread livestock grazing of rangeland, to a degree that leaves less than adequate residual cover remaining in the spring, is considered detrimental to LPC populations because grass height is reduced below that necessary for secure nesting cover and desirable food plants are markedly reduced (Bent 1932; Davis et al. 1979; Crawford 1980; Bidwell and Peoples 1991; Riley et al. 1992; Giesen 1994b). Residual cover at and around nests is thought to increase nest success because the nest is better concealed from predators (Davis et al. 1979; Wisdom 1980; Riley et al. 1992; Giesen 1994b).

The impacts of grazing on LPC habitat can vary widely, depending on climatic conditions, the state or health of range vegetation, and the type of grazing regime utilized. Drought tends to magnify grazing impacts, as both processes reduce plant cover (Giesen 2000). When forage is reduced by drought, what remains tends to be grazed more heavily unless animal numbers are reduced. As a result, some grazed areas may supply adequate habitat during periods of normal rainfall, but may be unable to support LPCs during periods of drought (Merchant 1982). Intensive and/or persistent grazing may reduce or eliminate residual tallgrass cover needed for nesting (Davis et al. 1979; Riley et al. 1992). Heavy grazing that repeatedly interrupts plant succession over a broad area may result in the conversion of tallgrass prairie to shortgrass or forb-dominated habitat (Hoffman 1963; Jackson and DeArment 1963; Litton et al. 1994) or shrub-dominated landscapes.

Suitable habitat for LPCs has been lost due to conversion to agriculture and modified through grazing practices and other factors, such that remaining suitable habitat is increasingly fragmented and isolated (Crawford 1980; Braun et al. 1994). Fragmentation may threaten local LPC populations through several mechanisms: habitat juxtaposition and remaining patches of rangeland may be smaller than necessary to support populations (Samson 1980); necessary habitat heterogeneity may be lost; habitat between patches may accommodate high densities of predators; and ability to move and/or disperse among suitable patches of habitat may decrease (Wilcove et al. 1986; Knopf 1996).

The US Fish and Wildlife Service final listing decision states that chronic intensive grazing is detrimental to plants and can be addressed by rest and deferment (periodic cessation of grazing), particularly during growing season when plant growth is often rapid. Many effects of overgrazing and overutilization on habitat quality are similar to effects produced by drought and likely are exacerbated by actual drought conditions (Davis et al. 1979, p.122; Merchant 1982, pp.31-33). However, when appropriately managed, livestock grazing can reduce grass density to facilitate movements of broods and enhance the production and diversity of forbs that provide insects particularly important to the diet of chicks.

Cumulative Impacts

Overgrazing and overutilization of plants has a negative effect on habitat quality for the lesser prairie-chicken. It is compounded when it occurs year after year. This can be avoided through proper rest and deferment.

Mitigation Measures

The proponent of the proposed action is a Participating Cooperator in the Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA) for the lesser prairie-chicken (*Tympanuchus pallidicinctus*) and dunes sagebrush lizard (*Sceloporus arenicolus*).

The goal of the Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (FWS), Center of Excellence for Hazardous Materials Management (CEHMM) and the Participating Cooperator is to reduce and/or eliminate threats to the LPC and/or DSL.

This Certificate of Participation (CP) and Certificate of Inclusion (CI) is voluntary agreement between BLM, FWS, CEHMM and the Participating Cooperator. Through this CP & CI, the Participating Cooperator voluntarily commits to implement specific conservation actions that will reduce and/or eliminate threats to the DSL and/or LPC

In addition to the conservation/management actions described below (Conservation Measures, page 4 and 5) and specific to the enrolled lands described herein, the Participating Cooperator agrees to the following conservation actions common to all participants as applicable based upon species and species habitat present on the enrolled properties:

- a) Cooperate with CEHMM in completion of the CP. After the Participating Landowner agrees to implement all conservation measures agreed upon by the BLM and FWS and/or designee, the Participating Landowner will sign the CP. The CP becomes effective upon the last concurrence signature of BLM, FWS, or CEHMM. The CCA is valid until the end of the agreement term, or

until the end of their participation in this CCA as documented in the CP, either through expiration or termination.

- b) Improve or maintain conservation lands as suitable LPC and/or DSL habitat for the duration of the CP. Lands can be enrolled under the CCA and the permit whether or not the Participating Landowner receives funding from CEHMM or other sources. Technical assistance is available from the Natural Resources Conservation Service (NRCS) and FWS to develop plans to improve and maintain habitat for the LPC and/or DSL. Financial assistance for the implementation of these plans may be available through conservation programs of the U.S. Department of Agriculture's National Food Security Act of 1985, as amended (Farm Bill) and/or the FWS's Partners for Fish and Wildlife Program (PFW) depending on annual funding. The CP will identify, among other things, suitable LPC/DSL habitat to be maintained on the conservation lands and the duration that this habitat will be maintained.
- c) Adhere to rangeland and grazing guidelines as described in the 2008 BLM Special Status Resource Management Plan Amendment at a minimum for ranch operations.
- d) Allow CEHMM, FWS, and/or NMDGF personnel, with prior notification, to survey enrolled lands for the presence of LPC and/or DSL and for habitat suitability for these species.
- e) Allow CEHMM personnel or their designees access to the enrolled lands for purposes of monitoring LPC and/or DSL populations and habitat.
- f) Allow CEHMM personnel or their designees access to the enrolled lands for purposes of compliance monitoring of conservation commitment.
- g) Use herbicides for shinnery oak management only when habitat goals cannot be achieved by other means, including grazing system management.
 - i. No herbicide treatments will be applied in dune complexes (NRCS sand hills ecological sites) and corridors between dune complexes. Maintain an application buffer around dune complexes of 100 m to ensure dunal stability.
 - ii. Prohibit tebuthiuron spraying within 500 m of DSL habitat. In addition, for DSL, prohibit spraying in dune complexes or within corridors, which connect dune complexes that are within 2000 m of each other. All application of tebuthiuron will be by a licensed applicator and in accordance with the New Mexico supplemental label for wildlife habitat.
 - iii. In conducting such treatments, the goal will be to temporarily reduce shinnery oak competition with grasses, allowing grass cover to increase naturally. Herbicides should be used at dosages that would set back (defoliate) shinnery oak, not kill it.
 - iv. Large block and linear application of herbicides will be avoided. Application should follow the natural patterns on the landscape such that only patches needing treatment are treated.
 - v. For LPC, herbicide treatment should not be applied around large oak motts or within 1.5 miles of active lek sites.

- vi. Post-treatment grazing management is essential to success. Grazing by any livestock will be deferred during the growing season for at least the two consecutive years following treatment. If vegetation response to treatment has been hindered due to drought or other factors additional deferments to ensure success of the treatment may be required.
- vii. Experimental treatments outside these guidelines may occur with the approval by FWS. Experimental treatments must be part of a quantitative research design to study vegetation response, viability of shinnery oak, drift, sub-surface spread, the interaction of herbicide treatment and/or grazing management and the response of LPC and DSL to various treatments.
- h) For livestock ranches, implement grazing management plans intended to move towards meeting specific habitat goals for the LPC and/or DSL as defined in the Collaborative Conservation Strategies for the Lesser Prairie-Chicken and Dunes Sagebrush Lizard in New Mexico (LPC/DSL Working Group 2005) on individual ranches. This may include adjustment of stocking rates, rest-rotation patterns, grazing intensity and duration, avoidance of nesting areas during nesting season, and contingency plans for varying prolonged weather patterns including drought.
- i) Avoid construction of new roads. If unavoidable, route and construct new roads, pipelines and power lines outside of occupied and suitable, unoccupied shinnery dune complexes as delineated by the FWS, BLM, and/or designees.
- j) Provide escape ramps in all open water sources and trenches for LPC and/or DSL. Any trenches dug on enrolled property will have escape ramps placed at the ends and approximately every 500 feet to allow for LPC/DSL escape. Trenches may alternatively be covered to avoid entrapment and should be inspected three times a day.
- k) Install fence makers along fences that cross through occupied habitat within 2 miles of an active lek. BLM, FWS, and CEHMM will help identify where the markers are needed and help plan the acquisition and installation of the markers.
- l) Initiate control of shinnery oak only after coordinating with and gaining approval from BLM and FWS concerning control procedures so they will not be detrimental to LPC and/or DSL.
- m) Provide information on annual basis to CEHMM on implementation of conservation commitment, observations of LPC/DSL on enrolled property, and any mortality of either species observed.
- n) Grazing by any livestock will be deferred during the growing season for at least the two consecutive years following vegetation treatment (*e.g.*, mesquite spray). If vegetation response to treatment has been hindered due to drought or other factors additional deferments to ensure success of the treatment may be required.

Additional Conservation Measures

Management Actions and Benefits for Lesser Prairie Chicken Conservation

Management Actions

- Install escape ramps in all open water sources.
- Maintain current grazing practices to continue to benefit LPC and livestock operation.
- Reseed or inter-seed disturbed areas.
- Allow LPC surveys.
- Remove old power lines and associated power poles where rancher has control of power line.
- Reduce invasive brush (non-shinnery oak).

Benefits

- Provides wildlife opportunity to escape water trough and reduce accidental drowning
- Prevents suitable habitat becoming unsuitable and promotes LPC retention in occupied areas
- Increases suitability of historic habitat
- May allow consistent access to new survey areas previously inaccessible
- Removes predator perches
- Restores characteristics and ratios of the desired native plant communities

Special Status Species

Dunes Sagebrush Lizard

The DSL is native to a small area of southeastern New Mexico and west Texas. A habitat specialist, the DSL only occurs in sand dune complexes associated with shinnery oak (Degenhardt et al. 1996), with areas often separated by large stretches of unsuitable habitat.

The DSL prefers active and semi-stabilized sand dunes associated with shinnery oak and scattered sandsage. The oaks provide dune structure, shelter, and habitat for the species' prey base. DSL are found in large dunes with deep, wind hollowed depressions called blowouts, where they remain under vegetation or loose sand during the hot part of the day and at night. These large, deep dunal blowouts (greater than 3 m deep and 32.9 m long) provide superior habitat with more area for cover (for thermoregulation and predator avoidance) and steeper slopes needed as breeding habitat. DSL avoid shallow blowouts.

DSL feed on ants, small beetles, crickets, grasshoppers, and spiders. Most feeding takes place within or adjacent to patches of vegetation, usually shinnery oak habitat. Individuals are diurnal and wary, and will seek protection and shelter in burrows, under the sand, beneath leaf litter, and under the shinnery oak canopy (BLM 2006). Within a dune complex, the shinnery flats between dune blowouts are used for

movement by females seeking nesting sites and for dispersal of recent hatchlings (Painter 2007). Therefore, it is imperative that connectivity be considered across interdunal areas.

Within the geographic range of the species, habitat is localized and fragmented where known populations are separated by vast areas of unoccupied habitat. Fitzgerald et al. (1997) observed isolated areas of apparently suitable habitat that did not contain DSL. It is possible that these observations are the result of local extinction events in isolated areas where recolonization is either impossible or has not yet occurred (Snell et al. 1997). It is also possible that these areas have never been occupied and other factors such as competition with or predation by other species prevent DSL occupation in otherwise suitable habitat. Recent surveys by the BLM have reconfirmed the presence of DSL within the known geographic range of the species. The BLM has also developed a habitat predictability model to help redefine the parameters of the known geographic range.

Conservation interests petitioned the USFWS to list the DSL as a threatened species under the Endangered Species Act. In 2001, the FWS ruled that such a listing was warranted, but precluded by the need to devote limited agency resources to other higher priority species. The species is currently considered a candidate species for listing. The 2008 Candidate Notice of Review retained the species at Listing Priority Number of 2, the highest priority ranking as a candidate species. On June 12, 2012 the USFWS, withdrew the proposed rule to list the dunes sagebrush lizard as endangered under the Endangered Species Act of 1973.

Environmental Impacts

Special Status Species

Direct and Indirect Effects

Dunes Sagebrush Lizard

There are no known direct impacts to DSL from livestock grazing. However, domestic livestock and wildlife grazing practices that reduce the ability of the land to sustain long term plant and animal production (Smith et al. 1996) may lead to the loss of grassland cover, mortality of plant species, and increased erosion. Further, improper grazing practices and increased conversion of rangelands to agricultural production may lead to habitat fragmentation and loss by promoting conditions favorable for shrub encroachment and by increasing infrastructure development, such as roads, drinkers, windmills, water pipelines, and fences (Dinerstein et al. 2000). These land management activities are compounded by extended drought periods and altered hydrologic functions.

The Dunes Sagebrush Lizard was a focal species in the 2008 Pecos District Special Status Species Approved Resource Management Plan Amendment. Through the planning process, the USFWS supported BLM's determination of "may affect, not likely to affect" for DSL. The management prescriptions of the plan include vegetation management and livestock management (grazing) as addressed on pages 15-23 of the Amendment and further in Appendix 2.

Under the no grazing alternative there would be no impacts to DSL.

Cumulative Impacts

Habitat changes facilitated by cattle grazing can influence resource availability and habitat selection for associated wildlife. When proper stocking rates, pasture rotation, and well-managed grazing methods are adhered to, vegetation could be manipulated in a manner advantageous to associated wildlife.

Mitigation Measures

No herbicide treatments will be applied in dune complexes (NRCS sand hills ecological sites) and corridors between dune complexes. Maintain an application buffer around dune complexes of 100 m to ensure dunal stability.

Prohibit tebuthiuron spraying within 500 m of DSL habitat. In addition, for DSL, prohibit spraying in dune complexes or within corridors, which connect dune complexes that are within 2000 m of each other. All application of tebuthiuron will be by a licensed applicator and in accordance with the New Mexico supplemental label for wildlife habitat.

Remove unnecessary development (non-functioning powerlines, fences etc.) from dunes, as funding is available.

3.5 Cave and Karst

Affected Environment

This allotment is located within a designated area of *Medium-High Karst* or *Cave Potential*. Karst features such as sinkholes have been documented in this area. Karst features are derived from dissolved limestone and gypsum from which caves and sinkholes can form, under the definition of caves in the Federal Cave Resource Protection Act of 1988.

Pursuant to Federal Register Notices, Vol. 76, No. 16, page 4373, January 23, 2011, all known Roswell Field Office hibernacula are under restricted access to monitor for the presence of White Nose Syndrome and prevent its spread if it arrives. White Nose Syndrome was first documented on hibernating bats in New York and by 2015 it had moved over 2000 miles across twenty five states and had killed well over 6 million bats. By spring of 2014, White Nose Syndrome (WNS) had been found in Missouri and Arkansas on cave myotis (*Myotis velifer incautus*), the first evidence of it infecting a western bat species. Any proposed entry whatsoever of these caves must be formally proposed to BLM.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

While the proposed action is located in a *Medium-High Potential Karst Area*, no surface cave/karst features were observed in the immediate vicinity of the proposed action. Livestock grazing could be affected by the presence of karst features if livestock became entrapped in deep sinkholes, which has

occurred with sheep grazing on karst land north of Roswell. This could be prevented by creating enclosures around identified karst features that pose a hazard to livestock. In the event that range improvement projects are proposed, the presence of karst features would be further analyzed in related environmental assessments.

A complete inventory of significant cave or karst features has not been completed for public land located in this grazing allotment. If at a later date, more significant caves or karst features are found on public land within this allotment, that cave or feature may be fenced to exclude livestock grazing and Off Highway Vehicle Use. A separate Environmental Analysis would be prepared to construct this enclosure fence.

Impacts from the No Grazing Action

Direct and Indirect Impacts

There will be no direct or indirect impacts to karst resources if a no grazing action alternative is selected.

Mitigation Measures and Residual Impacts

Any cave or karst feature or karst-like feature, such as a blowhole or sinkhole, discovered by the co-operator/contractor or any person working on the co-operator/contractor behalf, on BLM-managed public land shall be immediately reported to the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate action(s). Any decision as to the further mitigation measures will be made by the Authorized Officer after consulting with the co-operator/contractor.

3.6 Geology

➤ Paleontology

Affected Environment

The BLM manages paleontological resources for their scientific, educational, and recreational values in compliance with the Paleontological Resources Preservation Act (PRPA) of 2009. The PRPA affirms the authority for many policies the BLM has for managing resources, such as issuing permits for collecting and curating paleontological resources, and confidentiality of their locations. The law also defines prohibited acts, such as damaging or defacing paleontological resources, and establishes both criminal and civil penalties.

The BLM classifies geologic formations to indicate the likelihood of significant fossil occurrence (usually vertebrate fossils of scientific interest) according to the Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands (IM 2008-011). These classifications, Classes 1 to 5, determine the procedures to be followed prior to granting a paleontological clearance to proceed with a project.

All paleontological resource stipulations will be followed as indicated in the COAs attached to the APD. These stipulations may include, but are not limited to, altering the location or scope of the project, permanent fencing or other physical, temporary barriers, monitoring of earth disturbing construction, project area reduction or specific construction avoidance zones, and fossil recovery. If the assessment of the proposed action indicates a reasonable expectation of adverse impacts to significant paleontological resources, a field survey will be necessary to properly document and recover any fossil material and associated data. Upon review, a determination for final project clearance and stipulations shall be issued by the BLM/RFO.

The proposed action is not located within an area with a high PFYC. Impacts to paleontological resources are not anticipated.

Impacts from the No Action (Proposed) Alternative

Direct and Indirect Impacts

The Proposed Action would not affect any known scientifically significant paleontological resources. However, surface disturbing activities and increased human access could produce unexpected discoveries and potential paleontological resource damage. Direct impacts could include damage or destruction during surface disturbing activities, with subsequent loss of information. Indirect impacts would include fossil damage or destruction by erosion due to surface disturbance.

Mitigation Measures and Residual Impacts

If previously undocumented paleontological sites are encountered during development of the project, the project proponent will immediately stop all construction activities in the immediate vicinity of the discovery. The proponent will then immediately notify the paleontological monitor (if required), or the BLM/RFO paleontology resource staff. It is necessary to protect fossil material and their geological context upon discovery during construction. The BLM would then evaluate the site. Should the discovery be evaluated as significant, it will be protected in place until mitigation measures can be developed and implemented according to guidelines set by the BLM. Mitigation measures such as data and fossil recovery may be required by the BLM to prevent impacts to newly identified paleontological resources.

Impacts from the No Grazing Action

Direct and Indirect Impacts

By not approving the project under the No Grazing Action, there would be no impact to paleontological resources in the area.

Cumulative Impacts

While it is unlikely that there will be significant cumulative impacts from the proposed action, continued development and other surface-disturbing activities in this area may potentially have negative cumulative impacts on paleontological resources.

4.0 Supporting Information

4.1. List of Preparers

Glen Garnand, Environmental & Planning Coordinator
Al Collar, Geologist
Adam Ortega, Rangeland Management Specialist
Emily Metcalf, Rangeland Management Specialist
Helen Miller, Rangeland Management Specialist
Laura Hronec, Archaeologist
Michael McGee, Hydrologist
Michael Bilbo, Outdoor Recreation Planner
Knutt Peterson, Outdoor Recreation Planner & Cave Specialist
Randy Howard, Wildlife Biologist
Dan Baggao, Wildlife Biologist
Phil Watts, GIS Specialist
Vanessa Bussell, Realty Specialist
Ruben Sanchez, Realty Specialist
Howard Parman, Program Manager, Pecos District

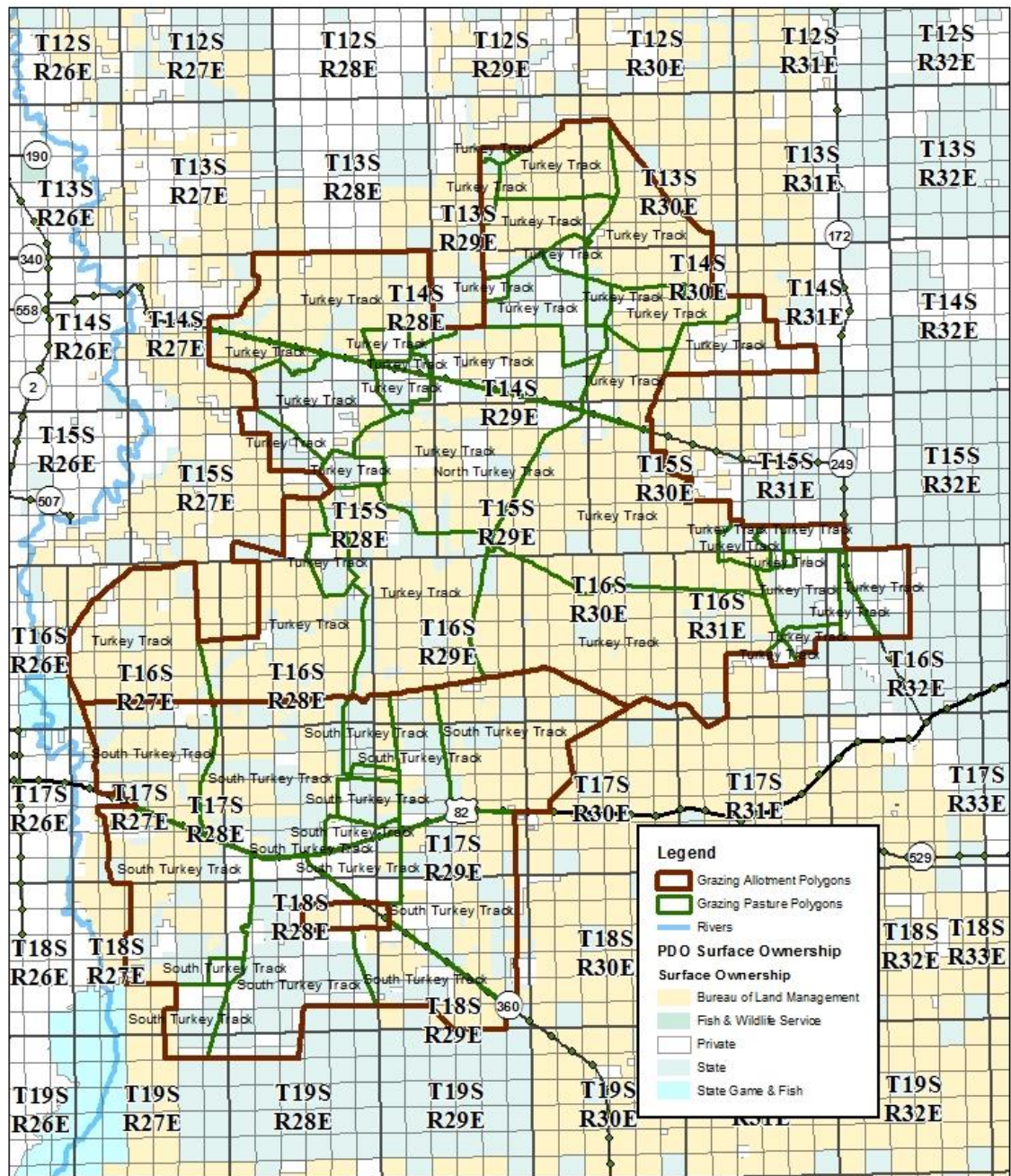
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North Turkey Track, Allotment 65075 & South Turkey Track, Allotment 77075



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